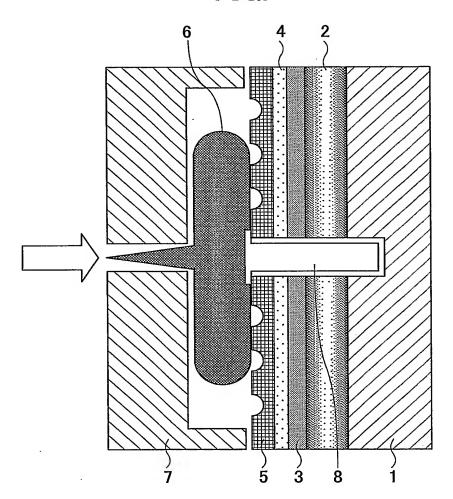
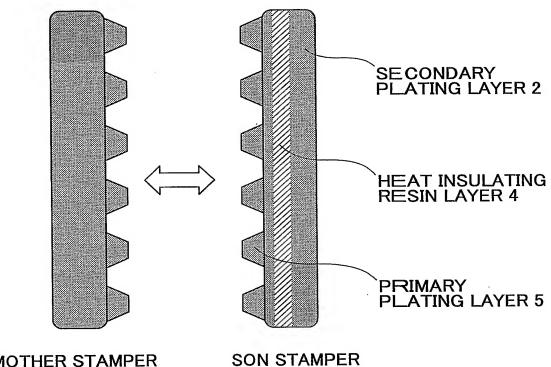
1/10

FIG.1

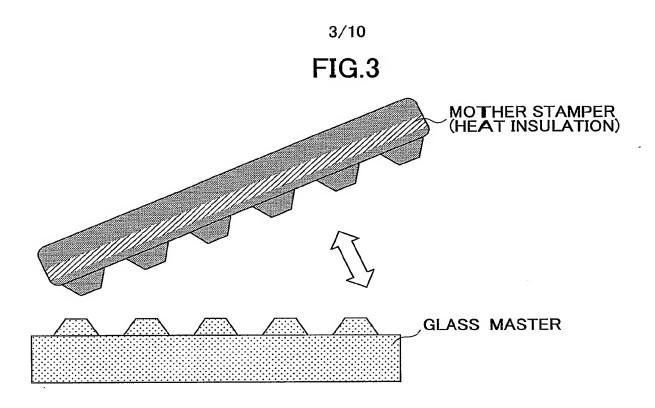


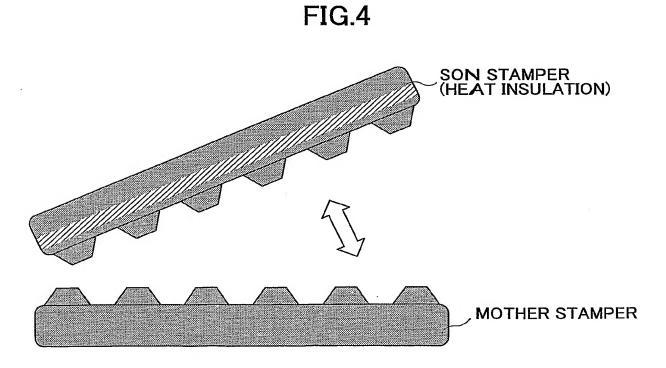
2/10

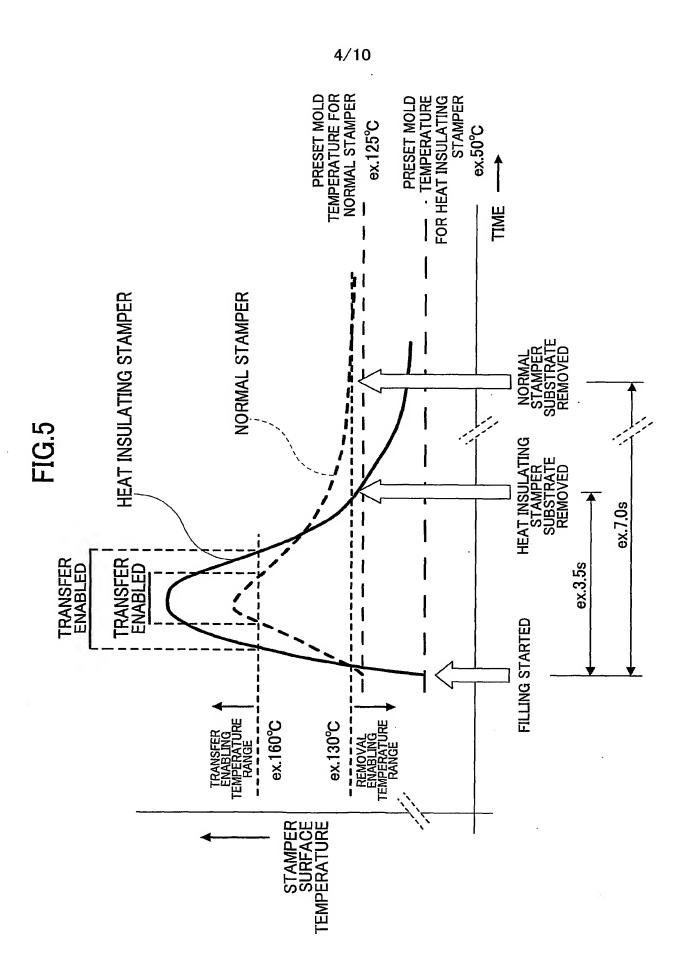
FIG.2



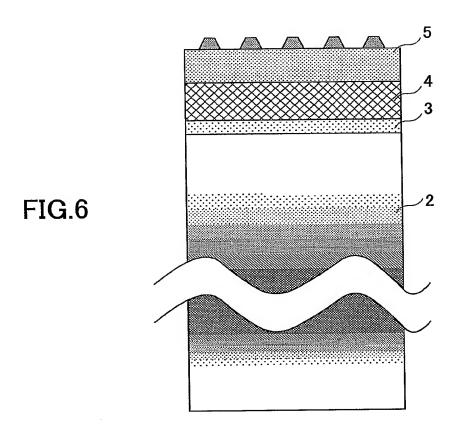
MOTHER STAMPER

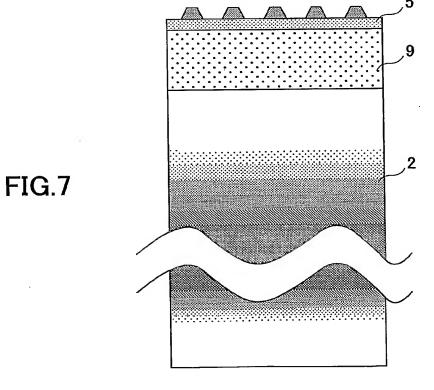






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FIG.8

1. GLASS MASTER PRODUCTION: RESIST APPLICATION/EXPOSURE/PHOTO LITHOGRAPHY



2. CONDUCTION PROCESSING <1>
(Ni SPUTTERING, ELECTROLESS Ni)



3. MASTER STAMPER PRODUCTION/ SEPARATION FILM TREATMENT <1>



4. MOTHER STAMPER PRODUCTION/ SEPARATION FILM TREATMENT <2>



J

5. SON STAMPER PRODUCTION: PRIMARY PLATING/ POLYMER LAYER FORMATION/CONDUCTION TREATMENT <2>/ SECONDARY PLATING FORMATION



6. SON STAMPER FINISHING: BACKSIDE GRINDING/ INNER AND OUTER SHAPE PROCESSING/INSPECTION 7/10

FIG.9

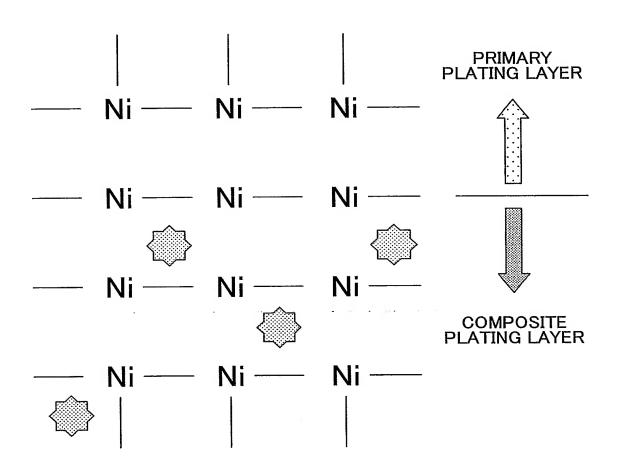


FIG.10A
FRONT SIDE

1

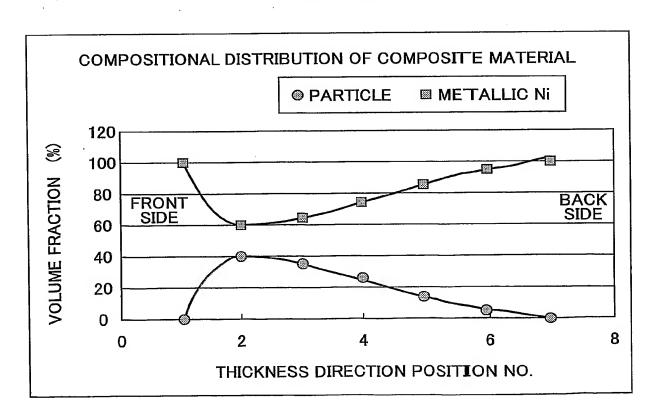
A PRONT SIDE

1

A PRONT SIDE

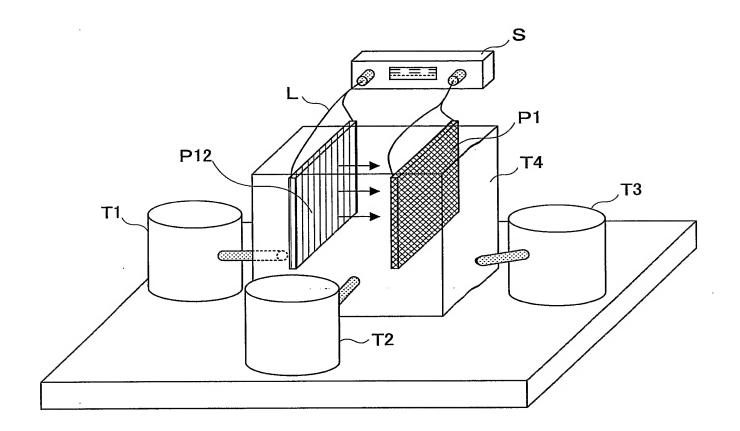
7

FIG.10B



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FIG.11



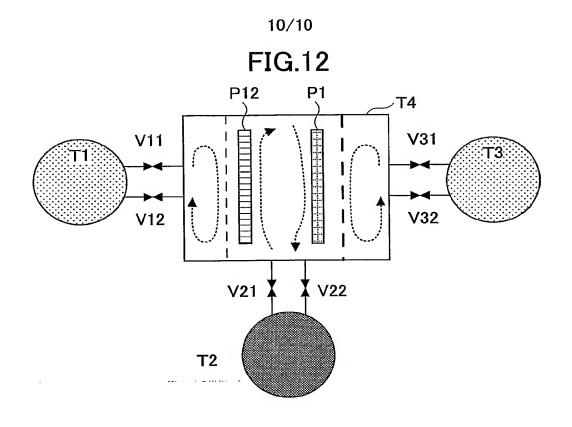


FIG.13
TEMPERATURE CHANGE
Ni vs Ni + F

